

5/21/84

DESCRIPTION OF REMAINING CONSTRUCTION WORK
IN THE UNIT 268 CONSTRUCTION SITE (PROJECT N-071)
EDWIN COOPER, INC., SAUGET PLANT

Refer to drawing D-24289, a copy of which has been marked and attached, for details pertaining to the following description of the remaining work necessary to complete the Unit 268 construction site (project N-071).

Beginning at the top of the drawing, track 21 will be filled with ballast (crushed rock) to level it, then the remaining new rail ties and rails will be installed. Some excavation work is necessary at the north end of the track and soil which has been dug up from the track and piled adjacent to it must be removed. This soil and in the case of all additional excavation pertaining to this project will be used as fill for the old dike area (i.e. tanks 900-905). The southern section of the track will be bordered on the west side by a concrete swale (purple) and the east side of track 21 will be covered with clean ballast (green). The area to the west of track 21 is either already covered by concrete or will be covered with asphalt. The northern section of the track will be covered with a fiberglass track pan (yellow). The trench running along the east side of the track is already complete.

The area between track 21 and the tanks, from the north end of building NP to the west side of tank T530 will be covered with 6 inches of concrete (purple). Most of this area has already been excavated; however, some excavation work remains to be done, especially to relocate the 12-inch sewer line near building NP (red-dashed line). The relocation of the 12-inch VCP sewer involves concrete encasement breakout, 12-inch VCP installation along a new route and 12-inch future sewer extension to the west side of track 21. Again all excavated soil will be used as fill for the old dike area.

Tanks T900 through T905 were formerly in a concrete-depressed dike (green). The tanks have been removed from this area. Concrete walls approximately 3 feet high will be constructed on the depressed dike area floor. This will create a sealed area for containment of the excavated materials. After placing and compacting all contaminated fill materials, the entire area will be sealed with a 3-inch asphalt overlay. This method of construction will allow easy removal of the contaminated materials in the future if required. The tanks will be installed approximately 3 feet above the surface of the asphalt after the site has been sealed.

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EDWIN COOPER, INC., SAUGET PLANT

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5/21/84

The trench located south of tanks T308, T404 and T313 has already been constructed. The area south of the trench will be back-filled with rock and paved with 3 inches of asphalt (green). The portion north of the trench will be covered with 6 inches of concrete, including the area just east of tank T313 (purple).

The ground between "G" Street and the tanks and existing Third Street will be covered with 3 to 4 inches of asphalt (green). The area east of Unit 268 itself is already paved with concrete (orange).

Upon completion of the civil work and sealing of the site, the temporary fence will be removed and above-ground piping and electrical work will be performed around all of the tanks without special precautions.

HEALTH AND SAFETY PLAN
FOR THE COMPLETION OF THE
UNIT 268 CONSTRUCTION SITE
EDWIN COOPER, INC., SAUGET PLANT

I. INTRODUCTION

The following plan will be used to provide adequate personnel safeguards and decontamination procedures during the completion of the Unit 268 construction site (project N-071) which involves working in a 2,3,7,8 TCDD contaminated work site. This plan includes required personal protective equipment, medical examinations and monitoring which will be provided during the completion of the project, personnel exposure monitoring, decontamination facilities and control, and site entry control.

II. SITE ENTRY

The work site will be encircled by a temporary fence which will limit access to and from the work area. One entrance will exist for personnel and one entrance will exist for equipment. If another equipment entrance is necessary to facilitate completion of the project the entrance will be the responsibility of the construction superintendent and will be chained and locked while not in use.

Personnel entry will be through several decontamination trailers. Only authorized personnel will be allowed in these trailers.

An asphalt pad will be provided inside the contaminated area at the equipment access gate to facilitate equipment decontamination. While not in use, the main equipment gate will be secured to eliminate unauthorized entry into the contaminated area.

In order to minimize the dust created by the construction, the work area will be wetted down on an "as needed" basis. A 1 1/2" fire hose will be used for this purpose. The hose will flow approximately 100 gallons per minute and will be connected to the existing plant fire system. The hose will be equipped with an adjustable nozzle to provide a fine mist so that the soil will be disturbed minimally. After the project is complete contaminated sections of the hose and the nozzle will be disposed of in the appropriate manner.

III. DECONTAMINATION FACILITIES

The personnel decontamination facilities will consist of three trailers. One trailer will be designated the "clean" trailer, the second the "contaminated" trailer, and the third the lunch room. These trailers will be connected by a temporary tunnel way. Entry onto the construction site will be through these trailers.

The "clean" trailer will be equipped with lockers in which workers can hang and store their "street" clothes. Benches will be provided for the convenience of these workers.

The "contaminated" trailer will be equipped with showers, basins, urinals, water closets, and a washer and dryer. Lockers will also be provided for workers to hang their work clothes which will be under the disposable coveralls. An attendant will launder these work clothes daily.

The "lunch" trailer will be equipped with a refrigerator for perishable lunch items. An attendant will cater each man as to drinks, smokes, and lunches.

Outside the "contaminated" trailer but inside the work area several drums will be provided for disposal of the disposable coveralls, boots, respirators, etc. These drums will be open-top steel drums with lids and lock rings so that they can be sealed for disposal. These drums will be lined with plastic bags.

IV. PHYSICAL EXAMINATIONS

All construction workers who will enter the work site on a routine basis will be given a physical examination upon starting the project, at two week intervals during construction, and upon completion of the project. This examination will be given at the Edwin Cooper dispensary by the Edwin Cooper medical staff at Edwin Cooper's cost. Annual exams will be offered to these workers for the two years following completion of the project.

The entry examination will consist of a medical history, complete and thorough skin examination, eye, ears, nose and throat visual examination, pulmonary function test, urinalysis, blood pressure, complete blood count, and blood chemistry which includes calcium, phosphorous, BUN, creatinine, BUN/creatinine ratio, uric acid, glucose, total protein, albumin, globulin, albumin/globulin ratio, total bilirubin, direct bilirubin, transaminase SGO, transaminase SGP, alkyl phosphatase, LDH, cholesterol, iron, magnesium, sodium, potassium, chloride, G-glutamyl transpep, and triglycerides.

IV. PHYSICAL EXAMINATIONS (continued)

The final examination and annual examination will consist of a complete skin examination and the complete blood chemistry.

Workers with abnormal liver function tests, abnormal pulmonary function tests, skin conditions which may be affected by or enhanced by the possibility of chloro acne, or perforated ear drums will not be allowed to work in the area.

Any worker with facial hair will not be allowed in the area because of the need to wear a respirator.

V. PERSONNEL EXPOSURE MONITORING

Select personnel performing work inside the contaminated area will be monitored for their exposure to dioxin. The monitoring will be performed by an Ethyl Corporation industrial hygienist and the lab analysis will be performed by Envirodyne Engineers.

Samples will be taken for eight hour time weighted average exposure even though the workers will be wearing appropriate respiratory protection. Samples will be collected during the first four days of work. The samples will then be sent to Envirodyne for analysis. If the results are 1 part per billion or below random sampling will then occur. If the results are higher than 1 part per billion sampling will continue on a regular basis.

Sampling techniques will meet the appropriate protocol for particulate (dust) exposure and will be of sufficient volume to allow for analysis of very low levels of dioxin.

VI. PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

All workers entering the contaminated area will be required to wear the following personal protective equipment:

- A) disposable coated Tyvek coveralls with hood;
- B) washable rubber safety boots;
- C) Cesco full face piece respirator with dual high efficiency dust cartridges;
- D) vinyl impregnated gloves.

All disposable protective clothing will be removed and deposited in the appropriate container (drum) outside the "contaminated" trailer before entering the "contaminated" trailer. Upon completion of the project these containers will be disposed of in the approved manner.

VI. PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT (continued)

Clothing worn under the disposable clothing will remain in the "contaminated" trailer until completion of the project. It will then be placed in sealed containers and disposed of in the approved manner. Edwin Cooper will furnish the under garments.

VII. PERSONNEL DECONTAMINATION PROCEDURE

Every worker will remove their street clothes in the "clean" trailer and put on the under garments provided by Edwin Cooper. They then will proceed to the "contaminated" trailer and put on the coveralls and personal protective equipment furnished by Edwin Cooper.

Upon leaving the contaminated area at the end of the work day they will deposit the disposable equipment/clothing in the appropriate container outside the "contaminated" trailer. The coveralls will be removed in the "contaminated" trailer and placed in a drum to be washed for reuse. The under garments will also be placed in an appropriate container for washing and reuse.

All workers must shower with soap and water before leaving the "contaminated" trailer. They then will move to the "clean" trailer and dress into their street clothes to leave work. Towels and wash cloths will be provided by Edwin Cooper and disposed of in the approved manner.

If Unit 268 personnel are required to enter the construction area they will wear the disposable coveralls, boot covers and dust respirator. After use these items will be disposed of in the proper manner. No showers will be required of the Unit 268 personnel since their exposure will be brief.

VIII. EQUIPMENT DECONTAMINATION PROCEDURE

All equipment leaving the work site will be decontaminated on the asphalt pad provided at the equipment gate. The equipment will be thoroughly washed off with a pressure sprayer using a mixture of soap and water and using a 125 psig water supply. The wash water will be minimized. After the equipment is washed off the asphalt pad will be flushed before the equipment is allowed to move from it.

The washdown water from the equipment, tools, and trailers will be collected in a 12,000 gallon fiberglass tank using a 2" electric submersible pump in a collection sump. This water will be sampled and analyzed and if less than 1 PPB it will be flushed to the sewer. If more than 1 PPB it will be disposed of in an approved manner.

VIII. EQUIPMENT DECONTAMINATION PROCEDURE (continued)

All hand tools and materials will be washed with soap and water and will be so washed before leaving the work area.

After the site has been sealed and all tools and equipment have been decontaminated, the temporary fence will be removed and the site will be reopened to all personnel.

IX. TRAINING

All workers will be given the following training prior to entering the work area:

- A) the hazards and effects of 2,3,7,8 TCDD exposure;
- B) routes of entry into the body of toxic materials and how to prevent them;
- C) how to properly don and maintain a respirator;
- D) signs and symptoms of chloro acne;
- E) proper decontamination procedures;
- F) plant emergency procedures;
- G) good personal hygiene habits while handling toxic materials.

X. LUNCH AND FOOD PRODUCTS

Smoking, gum chewing, tobacco chewing, and eating and drinking will be prohibited in the work area. A separate designated area will be provided for breaks. Anyone entering the break area must wash their boots, and thoroughly wash hands, arms, and face before entering the break area.

A lunch room will be provided for lunch. Anyone entering the lunch area must remove all disposable garments and thoroughly wash hands, arms, and face before entering the lunch room and consuming food, drinks, or smoking cigarettes.

A refrigerator will be supplied for perishable items.

XI. INJURIES AND PLANT EMERGENCIES

When injuries occur which are not life threatening but which will require medical attention the employee may leave the work area after removing all disposable equipment.

XI. INJURIES AND PLANT EMERGENCIES (continued)

In life-threatening injuries the employee will be removed from the site in the fastest method consistent with sound first aid practice. Plant medical personnel may enter the area with only the disposable coveralls, hoods, and boots. They may leave the area without washing after disposing of the protective garments in the appropriate manner.

In a plant emergency workers will leave the work area in the most expedient manner. Protective garments will be collected and disposed of as soon as the emergency allows. All equipment will remain in the work area.

ETHYL CORPORATION

LAW DEPARTMENT

ETHYL TOWER
451 FLORIDA
BATON ROUGE, LA. 70801

May 21, 1984

Director, Waste Management Division
U. S. EPA, Region V
230 S. Dearborn Street
Chicago, IL 60604

Attention: Dan Hopkins
Remedial Response Branch (5HR-13)

Re: 40 CRF Part 775, Subpart J
Disposal of Waste Material containing
TCDD; Edwin Cooper, Inc., Sauget, Illinois

Dear Sir:

Without conceding the applicability of the above referenced rule or the validity of the administrative order issued to Edwin Cooper, Inc., this is to formally notify you that traces of 2,3,7,8-TCDD have been found in portions of Edwin Cooper, Inc.'s oil lubricant production plant on Monsanto Avenue in Sauget, Illinois. This notice covers the requirements of §775.190(b), as suggested by Roger Field and Tom Daggett of EPA's office of regional counsel. Notification is given to you, pursuant to the administrative order, rather than to the Assistant Administrator. The site had previously been owned by Monsanto, which had used it for production of 2,4-D and the mixing of 2,4-D with 2,4,5-T. Edwin Cooper, Inc. has previously notified EPA Region V of this discovery and has met with representatives of the regional office.

Edwin Cooper, Inc.'s corporate headquarters is 1525 South Broadway, St. Louis, Missouri 63104. Edwin Cooper, Inc. is a wholly-owned subsidiary of Ethyl Corporation.

Two sets of samples were taken in November and December of 1983. The analysis has previously been submitted. The report of the analysis includes the method of detection, etc. specified in §775.190(b)(3). When the analysis indicated the presence of 2,3,7,8-TCDD, a construction project in the area was suspended and the area roped off. As you know, Edwin Cooper, Inc. has agreed with the Region V office to take and analyze further soil samples to better characterize the nature and extent of the contamination.

6/1/84

Director, Waste Mangement Division
U. S. EPA, Region V
May 21, 1984
page 2

Since this site is in the middle of our manufacturing facility, which for the most part is paved or covered with crushed rock, we believe that the most prudent course of action to minimize existing environmental exposure is to complete the construction project, in accordance with the description of work and health and safety plan previously submitted. No soil would be moved off-site, and all soil suspected of being contaminated with 2,3,7,8-TCDD would be covered with asphalt or rock in a manner that would prevent dusting of soil, but would allow reasonable access to the soil in the event the soil needed to be removed. It is estimated that there are 110 cubic yards of soil that is piled and will be placed in a concrete vault area that is capable of containing 130 cubic yards, and will be sealed with asphalt.

The health and safety plan provides for a decontamination procedure for personnel and equipment involved with soil. The waste produced in this activity is the only material that would be disposed off-site, presumably at a TSDF approved for disposal of waste contaminated with 2,3,7,8-TCDD.

However, no waste material from the decontamination process will move off-site until 60 days after this notice is received or until you exercise your discretion under §775.197(c) and waive the 60 day notice requirement.

We would appreciate your or Region V's assistance in locating a disposal facility for the waste produced in the decontamination process. Of course, if we find a facility specifically permitted for TCDD disposal this notice will not be necessary, according to 40 CFR §775.197(a).

You may direct questions for clarification or for additional information to me (504 - 388-7058), to Don E. Park, Director of Environmental Affairs for Ethyl Corporation (504 - 359-2247) or to Sam McWilliams, Edwin Cooper Plant Manager at Sauget (618 - 274-4000).

Respectfully yours,

ETHYL CORPORATION


By: David C. Bach
Assistant Counsel

DCB:ms

cc: S. McWilliams
D. E. Park

AGREEMENT

Edwin Cooper, Inc. having satisfied the requirements specified in paragraph 12(E) of Administrative Order V-W-84-007, EPA hereby authorizes Edwin Cooper, Inc. complete construction of project N-071 in accordance with the various plans submitted and approved in accordance with said paragraph 12(E).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

By: _____

Date: _____

EA LLC

DATE: 8/2/95 FAX MESSAGE PAGE 1 OF 7 PAGES

ETHYL PETROLEUM ADDITIVES, INC.
MONSANTO AVENUE
SAUGET, ILLINOIS 62201

PHONE NUMBERS: (618) 583-1000
(314) 436-1445
FAX NUMBER: (618) 583-1388

TO: ANN BURKS

LOCATION: RICHMOND

ATTN: _____

FROM: JOHN JACOBY

ROUTINE: ()

URGENT: ()

FAX NUMBER: 377 5519

MESSAGE: UNIT 290 WORK PLAN

PLEASE SEND COPIES TO THE FOLLOWING:

for the Unit 290
6/8/88

HEALTH AND SAFETY PLAN
FOR THE COMPLETION OF THE
UNIT 290 CONSTRUCTION SITE
ETHYL PETROLEUM CORPORATION, SAUGET PLANT

I. INTRODUCTION

The following plan will be used to provide adequate personnel safeguards and decontamination procedures during the completion of the Unit 290 construction site (project N-185) which involves working on a 2,3,7,8 TCDD contaminated work site. This plan includes required personal protective equipment, medical examinations and monitoring which will be provided during the completion of the project, personnel exposure monitoring, decontamination facilities and control, and site entry control.

II. SITE ENTRY

The work site will be encircled by a temporary fence which will limit access to and from the work area. One entrance will exist for personnel and one entrance will exist for equipment. If another equipment entrance is necessary to facilitate completion of the project, the entrance will be the responsibility of the construction superintendent and will be chained and locked while not in use.

Personnel entry will be through several decontamination trailers. Only authorized personnel will be allowed in these trailers.

An asphalt pad will be provided inside the contaminated area at the equipment access gate to facilitate equipment decontamination. While not in use, the main equipment gate will be secured to eliminate unauthorized entry into the contaminated area.

A 1 1/2" water line will be provided for decontamination of personnel and equipment. The hose will flow approximately 75 gallons per minute and will be connected to the existing city water system. The hose will be equipped with an adjustable nozzle to provide a fine mist to facilitate decontamination of the work site and personnel. After the project is complete, contaminated sections of the hoses and the nozzles will be disposed of in the appropriate manner.

III. DECONTAMINATION FACILITIES

The personnel decontamination facilities will consist of three trailers. One trailer will be designated the "clean" trailer, the second the "contaminated" trailer, and the third the lunch room. These trailers will be connected by a temporary tunnel way. Entry onto the construction site will be through these trailers.

The "clean" trailer will be equipped with lockers in which workers can hang and store their "street" clothes. Benches will be provided for the convenience of these workers.

The "contaminated" trailer will be equipped with showers, basins, urinals, water closets, and a washer and dryer. Lockers will also be provided for workers to hang their work clothes which will be under the disposable coveralls. An attendant will launder these work clothes daily.

The "lunch" trailer will be equipped with a refrigerator for perishable lunch items. An attendant will cater each man as to drinks, smokes, and lunches.

Outside the "contaminated" trailer but inside the work area several drums will be provided for disposal of the disposable coveralls, boots, respirators, etc. These drums will be open-top steel drums with lids and lock rings so that they can be sealed for disposal. These drums will be lined with plastic bags.

IV. PHYSICAL EXAMINATIONS

All construction workers who will enter the work site on a routine basis will be given a physical examination upon starting the project, at two week intervals during construction, and upon completion of the project. This examination will be given at the Ethyl Corp. dispensary by the Ethyl Corp. medical staff at Ethyl Corporation's cost. Annual Exams will be offered to these workers for the two years following completion of the project.

The entry examination will consist of a medical history, complete and thorough skin examination, eye, ears, nose and throat visual examination, pulmonary function test, urinalysis, blood pressure, complete blood count, and blood chemistry which includes calcium, phosphorous, BUN, creatinine, BUN/creatinine ratio, uric acid, glucose, total protein, albumin, globulin, albumin/globulin ratio, total bilirubin, direct bilirubin, transaminase SGO, transaminase SGP, alkyl phosphatase, LDH, cholesterol, iron, magnesium, sodium, potassium, chloride, G-glutamyl transpep, and triglycerides.

IV. PHYSICAL EXAMINATIONS (continued)

The final examination and annual examination will consist of a complete skin examination and the complete blood chemistry.

Workers with abnormal liver function tests, abnormal pulmonary function tests, skin conditions which may be affected by or enhanced by the possibility of chloro acne, or perforated ear drums will not be allowed to work in the area.

Any worker with facial hair will not be allowed in the area because of the need to wear respirator. All workers will be fit and instructed in the use of a respirator.

V. PERSONNEL EXPOSURE MONITORING

Select personnel performing work inside the contaminated area will be monitored for their exposure to dioxin. The monitoring will be performed by an Ethyl Corporation industrial hygienist and the lab analysis will be performed by Envirodyne Engineers.

Samples will be taken for eight hour time weighted average exposure even though the workers will be wearing appropriate respiratory protection. Samples will be collected during the first four days of work. The samples will then be sent to Envirodyne for analysis. If the results are 1 part per billion or below random sampling will then occur. If the results are higher than 1 part per billion sampling will continue on a regular basis.

Sampling techniques will meet the appropriate protocol for particulate (dust) exposure and will be of sufficient volume to allow for analysis of very low levels of dioxin.

VI. PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

All workers entering the contaminated area will be required to wear the following personal protective equipment:

- A) disposable coated Tyvek coveralls with hood;
- B) washable rubber safety boots;
- C) Cesco full face piece respirator with dual high efficiency dust cartridges;
- D) vinyl impregnated gloves.

All disposable protective clothing will be removed and deposited in the appropriate container (drum) outside the "contaminated" trailer before entering the "contaminated" trailer. Upon completion of the project these containers will be disposed of in the approved manner.

VI. PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT (continued)

Clothing worn under the disposable clothing will remain in the "contaminated" trailer until completion of the project. It will then be placed in sealed containers and disposed of in the approved manner. Ethyl Corp. will furnish the under garments.

VII. PERSONNEL DECONTAMINATION PROCEDURE

Every worker will remove their street clothes in the "clean" trailer and put on the under garments provided by Ethyl Corp. They then will proceed to the "contaminated" trailer and put on the coveralls and personal protective equipment furnished by Ethyl Corporation.

Upon leaving the contaminated area at the end of the work day they will deposit the disposable equipment/clothing in the appropriate container outside the "contaminated" trailer. The coveralls will be removed in the "contaminated" trailer and placed in a drum to be washed for reuse. The under garments will also be placed in an appropriate container for washing and reuse.

All workers must shower with soap and water before leaving the "contaminated" trailer. They then will move to the "clean" trailer and dress into their street clothes to leave work. Towels and wash cloths will be provided by Ethyl Corp. and disposed of in the approved manner.

not appropriate
If Unit 268 personnel are required to enter the construction area they will wear the disposable coveralls, boot covers and dust respirator. After use these items will be disposed of in the proper manner. No showers will be required of the Unit 268 personnel since their exposure will be brief.

VIII. EQUIPMENT DECONTAMINATION PROCEDURE

All equipment leaving the work site will be decontaminated on the asphalt pad provided at the equipment gate. The equipment will be thoroughly washed off with a pressure sprayer using a mixture of soap and water and using a 125 psig water supply. The wash water will be minimized. After the equipment is washed off the asphalt pad will be flushed before the equipment is allowed to move from it.

The washdown water from the equipment, tools, and trailers will be collected in two holding tanks using a 2" electric submersible pump in a collection sump. This water will be sampled and analyzed for 2,3,7,8, TCDD, if none is detected it will be flushed to the sewer. If 2,3,7,8, TCDD is detected the water will be decontaminated before disposal.

VIII. EQUIPMENT DECONTAMINATION PROCEDURE (continued)

All hand tools and materials will be washed with soap and water and will be so washed before leaving the work area.

After the site has been sealed and all tools and equipment have been decontaminated, the temporary fence will be removed and the site will be reopened to all personnel.

IX. TRAINING

All workers will be given the following training prior to entering the work area:

- A) the hazards and effects of 2,3,7,8 TCDD exposure;
- B) routes of entry into the body of toxic materials and how to prevent them;
- C) how to properly don and maintain a respirator;
- D) signs and symptoms of chloro acne;
- E) proper decontamination procedures;
- F) plant emergency procedures;
- G) good personal hygiene habits while handling toxic materials.

X. LUNCH AND FOOD PRODUCTS

Smoking, gum chewing, tobacco chewing, and eating and drinking will be prohibited in the work area. A separate designated area will be provided for breaks. Anyone entering the break area must wash their boots, and thoroughly wash hands, arms, and face before entering the break area.

A lunch room will be provided for lunch. Anyone entering the lunch area must remove all disposable garments and thoroughly wash hands, arms, and face before entering the lunch room and consuming food, drinks, or smoking cigarettes.

A refrigerator will be supplied for perishable items.

XI. INJURIES AND PLANT EMERGENCIES

When injuries occur which are not life threatening but which will require medical attention the employee may leave the work area after removing all disposable equipment.

XI. INJURIES AND PLANT EMERGENCIES (continued)

In life-threatening injuries the employee will be removed from the site in the fastest method consistent with sound first aid practice. Plant medical personnel may enter the area with only the disposable coveralls, hoods, and boots. They may leave the area without washing after disposing of the protective garments in the appropriate manner.

In a plant emergency workers will leave the work area in the most expedient manner. Protective garments will be collected and disposed of as soon as the emergency allows. All equipment will remain in the work area.

DATE: 8/2/95 FAX MESSAGE PAGE 1 OF 8 PAGES

ETHYL PETROLEUM ADDITIVES, INC.
MONSANTO AVENUE
SAUGET, ILLINOIS 62201

PHONE NUMBERS: (618) 583-1000
(314) 436-1445
FAX NUMBER: (618) 583-1388

TO: ANN BURKS

LOCATION: Richmond

ATTN: _____

FROM: Jon Jacoby

ROUTINE: ()

URGENT: ()

FAX NUMBER: _____

MESSAGE: RAIL SPUR WORK PLAN

PLEASE SEND COPIES TO THE FOLLOWING:

Low droxin ~~IVP~~
DRAFT 1
revised at 2/14/92
also Williams et al
89

**HEALTH, ENVIRONMENTAL AND SAFETY PLAN
FOR THE COMPLETION OF THE
RAIL SPUR 19½ CONSTRUCTION SITE
ETHYL PETROLEUM ADDITIVES, INC.
SAUGET PLANT**

I. INTRODUCTION

The following plan will be used to provide adequate personnel safeguards and decontamination procedures during the completion of the railspur 19½ construction site (Project S-69211) which involves working in a 2,3,7,8, TCDD contaminated work site. This plan includes required personal protective equipment, medical examinations and monitoring which will be provided during the completion of the project, personnel exposure monitoring, decontamination facilities and control, and site entry control.

Unless specifically stated otherwise, all requirements herein will be provided by the contractor.

II. SITE ENTRY

The work site will be encircled by barricade tape which will limit access to and from the work area. One entrance will exist for personnel and one entrance will exist for equipment. If another equipment entrance is necessary to facilitate completion of the project, the entrance will be the responsibility of the construction superintendent and will be chained and locked while not in use.

Personnel entry will be through several decontamination trailers. Only authorized personnel will be allowed in these trailers. An asphalt pad will be provided inside the contaminated area at the equipment access gate to facilitate equipment decontamination. While not in use, the main equipment gate will be secured to eliminate unauthorized entry into the contaminated area.

A 1 ½" water line will be provided for decontamination of personnel and equipment. The hose will flow approximately 75 gallons per minute and will be connected to the existing city water system. The hose will be equipped with an adjustable nozzle to provide a fine mist to facilitate decontamination of the work site and personnel. After the project is complete, contaminated sections of the hoses and the nozzles will be disposed of in the appropriate manner.

**HEALTH, ENVIRONMENTAL, AND SAFETY PLAN
FOR THE COMPLETION OF THE RAIL SPUR 19½
CONSTRUCTION SITE
JANUARY 28, 1991
PAGE 2**

III. DECONTAMINATION FACILITIES

The personnel decontamination facilities will consists of three trailers. One trailer will be designated the "clean" trailer, the second the "contaminated" trailer, and the third the lunch room. These trailers will be connected by a temporary tunnel way. Entry onto the construction site will be through these trailers.

The "clean" trailer will be equipped with lockers in which workers can hang and store their "street" clothes. Benches will be provided for the convenience of these workers.

The "contaminated" trailer will be equipped with showers, basins, urinals, water closets, and a washer and dryer. Lockers will also be provided for workers to hang their work clothes which will be under the disposable coveralls. An attendant will launder these clothes daily. Ethyl Petroleum Additives, Inc.-- to be referred to herein as Ethyl -- will provide the contaminated trailer.

The "lunch" trailer will be equipped with a refrigerator for perishable lunch items. An attendant will cater each man as to drinks, smokes, and lunches.

Outside the "contaminated" trailer but inside the work area, several drums will be provided for disposal of the disposable coveralls, boots, respirators, etc. These drums will be open-top steel drums with lids and lock rings so that they can be sealed for disposal. These drums will be lined with plastic bags. The drums, lids, lock rings and liners will be provided by Ethyl.

VI. PHYSICAL EXAMINATIONS

All construction workers who will enter the work site on a routine basis will be given a physical examination upon starting the project, at two week intervals during construction, and upon completion of the project. This examination will be given at the Ethyl dispensary by the Ethyl medical staff at Ethyl's cost. Annual exams will be offered to these workers for the two years following completion of the project. Ethyl will need one week notice before the entry and exit examinations and 3 days notice before the two-week examinations.

**HEALTH, ENVIRONMENTAL, AND SAFETY PLAN
FOR THE COMPLETION OF THE RAIL SPUR 19½
CONSTRUCTION SITE
JANUARY 28, 1991
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VI. PHYSICAL EXAMINATIONS (continued)

The entry examination will consist of a medical history, complete and thorough skin examination, eye, ears, nose and visual examination, pulmonary function test, urinalysis, blood pressure, complete blood count, and blood chemistry which includes calcium, phosphorous, BUN, creatinine, BUN/creatinine ratio, uric acid, glucose, total protein, albumin, globulin, albumin/globulin ratio, total bilirubin, direct bilirubin, transaminase SGO, transaminase SGP, alkyl phosphatase, LDH, cholesterol, iron, magnesium, sodium, potassium, chloride, G-glutamyl transpep, and triglycerides.

The final examination and annual examination will consist of a complete skin examination and the complete blood chemistry.

Workers with abnormal liver function tests, abnormal pulmonary function tests, skin conditions which may be affected by or enhanced by the possibility of chloro acne, or perforated ear drums will not be allowed to work in the area.

Any worker with facial hair will not be allowed in the area because of the need to wear respirator. All workers will be fitted and instructed in the use of a respirator.

V. PERSONNEL EXPOSURE MONITORING

All monitoring described in this Section V will be performed by Ethyl.

Select personnel performing work inside the contaminated area will be monitored for their exposure to dioxin. The monitoring will be performed by an Ethyl industrial hygienist and the lab analysis will be performed by an outside contract laboratory.

Samples will be taken for eight hour time weighted average exposure even though the workers will be wearing appropriate respiratory protection. Samples will be collected during the first four days of work. The samples will then be sent to an outside contract laboratory for analysis. If the results are 1 part per billion or below, random sampling will then occur. If the results are higher than 1 part per billion, sampling will continue on a regular basis.

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V. PERSONNEL EXPOSURE MONITORING (continued)

Sampling techniques will meet the appropriate protocol for particulate (dust) exposure and will be of sufficient volume to allow for analysis of very low levels of dioxin.

VI. PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

All workers entering the contaminated area will be required to wear the following personal protective equipment:

- A. disposable coated Tyvek coveralls with hood. St. Louis Safety #P710 coveralls polyethylene coated Tyvek meets the requirements.
- B. washable rubber safety boots. St. Louis Safety #87801 16" Buffalo steel toe PVC boots meet the requirements.
- C. full face piece respirator with dual high efficiency dust cartridges. Valley Corporation Scott Model 65 full facepiece respirator Model 642-0A-H cartridges; Model 682-9101 nosepiece kit meet the requirement. The respirator to be in appropriate sizes. Cartridges are to be changed each day.
- D. vinyl impregnated gloves. (314) 428 3100 Wise El Santo vinyl coated gloves #17-773 and Edmont Petroflex glove 14" gauntlet with knit liners meet the requirements.

Alternate equipment to the above must be approved by Ethyl.

All disposable protective clothing will be removed and deposited in the appropriate container (drum) outside the "contaminated" trailer before entering the "contaminated" trailer. Upon completion of the project these containers will be disposed of in the approved manner.

Clothing worn under the disposable clothing will remain in the "contaminated" trailer until completion of the project. It will then be placed in sealed containers and disposed of in the approved manner. Contractor will furnish the under garments.

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VII. PERSONNEL DECONTAMINATION PROCEDURE

Every worker will remove their street clothes in the "clean" trailer and put on the under garments provided by the contractor. Then they will proceed to the "contaminated" trailer and put on the coveralls and personal protective equipment furnished by the contractor.

Upon leaving the contaminated area at the end of the work day they will deposit the disposable equipment/clothing in the appropriate container outside the "contaminated" trailer. The coveralls will be removed in the "contaminated" trailer and placed in a drum to be washed for reuse. The under garments will also be placed in an appropriate container for washing and reuse.

All workers must shower with soap and water before leaving the "contaminated" trailer. They then will move to the "clean" trailer and dress into their street clothes to leave work. Towels and wash cloths will be provided by the contractor and disposed of in the approved manner.

VIII. EQUIPMENT DECONTAMINATION PROCEDURE

All equipment leaving the work site will be decontaminated on the asphalt pad provided at the equipment gate. The equipment will be thoroughly washed off with a pressure sprayer using a mixture of soap and water and using a 125 psig water supply. The wash water will be minimized. After the equipment is washed off, the asphalt pad will be flushed before the equipment is allowed to move from it.

The washdown water from the equipment, tools, and trailers will be collected in two holding tanks using a 2" electric submersible pump in a collection sump. Ethyl will provide one holding tank of about 3,000 gallon capacity. This water will be sampled and analyzed for 2,3,7,8, TCDD. If the amount detected is below 1PPB, it will be flushed to the sewer. If 2,3,7,8, TCDD is detected at levels above 1PPB, the water will be decontaminated before disposal by circulation by a pump through a carbon bed. This pump, carbon bed, and associated piping, which can be PVC, will be provided by the contractor.

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VIII. EQUIPMENT DECONTAMINATION PROCEDURE (continued)

All hand tools and materials will be washed with soap and water and will be so washed before leaving the work area.

After the site has been declared safe and all tools and equipment have been decontaminated, the barricade tape will be removed and the site will be reopened to all personnel.

IX. TRAINING

All workers will be given the following training by Ethyl prior to entering the work area:

- A. the hazards and effects of 2,3,7,8 TCDD exposure;
- B. routes of entry into the body of toxic materials and how to prevent them;
- C. how to properly don and maintain a respirator;
- D. signs and symptoms of chloro acne;
- E. proper decontamination procedures;
- F. plant emergency procedures;
- G. good personal hygiene habits while handling toxic materials.

The training will last approximately two hours.

X. LUNCH AND FOOD PRODUCTS

Smoking, gum chewing, tobacco chewing, and eating and drinking will be prohibited in the work area. A separate designated area will be provided for breaks. Anyone entering the break area must wash their boots, and thoroughly wash hands, arms, and face before entering the break area.

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X. LUNCH AND FOOD PRODUCTS (continued)

A lunch room will be provided for lunch. Anyone entering the lunch area must remove all disposable garments and thoroughly wash hands, arms, and face before entering the lunch room and consuming food, drinks, or smoking cigarettes.

A refrigerator will be supplied for perishable items.

XI. INJURIES AND PLANT EMERGENCIES

When injuries occur which are not life threatening but which will require medical attention, the employee may leave the work area after removing all disposable equipment.

In life-threatening injuries, the employee will be removed from the site in the fastest method consistent with sound first aid practice.

In a plant emergency, workers will leave the work area in the most expedient manner. Protective garments will be collected and disposed of as soon as the emergency allows. All equipment will remain in the work area.

WORK AREA FOR REMOVING
CONTAMINATED SOIL

NEW PFB
NEW PS-2

EXIST FENCE

EXIST TRACK #8

65'-0"

65'-0"

NEW NORTH U-290
TANK DIKE

12 SPAC 15'-0" 180'
PIPE RACK COLS

12'-0"

35'-8"

0
ST

0 55

NEW
RIDGE

PERSONNEL
ENTRY

SHELTER
FOR
BRAKES
LUNCH
TRAILER

NEW SPUR #19

WASH
AREA
30' X 30'
WITH HIGH
CURB
CLEAN
TRAILER

CONTAMINATED
TRAILER

TRUCK TRAFFIC

THIS AREA
NOT TO BE
USED

NEED: SANITARY SEWER TIE IN.
CITY WATER TIE IN.
POWER CONNECTION POINT.

PLACE
CONTAMINATED
SOIL
HERE
500
CYDS.

30'-0"

TRACK 21

21

DATE: 7/2/95 FAX MESSAGE PAGE 1 OF 12 PAGES

ETHYL PETROLEUM ADDITIVES, INC.
MONSANTO AVENUE
SAUGET, ILLINOIS 62201

PHONE NUMBERS: (618) 583-1000
(314) 436-1445
FAX NUMBER: (618) 583-1388

TO: ANN BURKS

LOCATION: RICHMOND

ATTN: _____

FROM: JOHN JACOBY

ROUTINE: ()

URGENT: ()

FAX NUMBER: 377-5579

MESSAGE: Following is 268 WORK PLAN

PLEASE SEND COPIES TO THE FOLLOWING:

